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ABSTRACT

This paper explores the impact of school reform on learning outcomes and on the professional culture of the principalship. The report draws on findings from several research projects involving surveys and case studies in the period 1993 to 1998, with special focus on the Schools of the Future reform in Victoria, Australia. The article describes the research programs used in the study, and offers an account of the emerging roles and preferences of principals for the new organizational arrangements. A description of new mechanisms for the management of resources sets the scene for a review of findings on learning outcomes. The final section describes the professional culture of the principalship that is emerging under these conditions. The findings show that despite several dysfunctions, unfulfilled expectations, and intensification of work, a large majority of principals would not return to previous organizational governance. Structural equation modeling of the sources used in the study revealed a stable pattern of direct and indirect effects of reform elements on learning outcomes for students. Case studies revealed that principals played an important role in helping link the structural aspects of reform to learning and teaching. Leadership was strategic and empowering more than it was heroic or "hands on." (Contains 42 references.) (RJM)

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STRATEGIC LEADERSHIP, RESOURCE MANAGEMENT AND EFFECTIVE SCHOOL REFORM

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STRATEGIC LEADERSHIP, RESOURCE MANAGEMENT AND EFFECTIVE SCHOOL REFORM

Brian J. Caldwell[1]

ABSTRACT

This paper is concerned with the impact of school reform on the professional culture of the principalship, drawing on findings from several research projects involving surveys and case studies in the period 1993 to 1998. The focus is on the Schools of the Future reform in Victoria, Australia. Despite several dysfunctions, unfulfilled expectations and intensification of work, a large majority of principals would not wish to return to previous arrangements. Structural equation modelling of survey data reveals a stable pattern of direct and indirect effects of elements of the reform on learning outcomes for students. Case study reveals that principals play an important role in helping link the structural aspects of reform to learning and teaching and the support of learning and teaching. Leadership is strategic and empowering more than it is heroic or 'hands on'. Many issues remain to be resolved including the manner in which the profession is involved in the design of reform and the nature and resourcing of public education.

A feature of school reform around the world has been the systematic decentralisation to the school level of authority, responsibility and accountability within a centrally-determined framework of curriculum, policy, priorities and standards. Indeed, it is now hard to find a nation where changes along these lines have not taken place or are planned or are proposed. How these changes have impacted on the professional actions and cultures of teachers and their leaders is of critical importance, as is the extent to which they have had impact on learning outcomes for students.

Context for research

Reform along these lines has occurred in every state and territory in Australia over the last quarter century, with varying rates, extents and underpinning ideologies (see Caldwell, 1994 for an account of factors underpinning such reforms in Australia, Britain, Canada, Hong Kong, New Zealand and the United States). In this paper, particular attention is given to the processes and outcomes of the most recent wave of reform in Victoria, which has occurred since early 1993 under the rubric of Schools of the Future. Almost 90% of the state's budget for public education has been decentralised to schools for local decision-making within a curriculum and standards framework in eight key learning areas. Schools have a capacity to select their own staff, who remain employed by the central authority, with provision for annual and triennial report to the local community and the state Department of Education on a range of indicators. With 1700 schools, this is the largest system of public education anywhere to have decentralised such a high proportion of the total budget, covering virtually all non-capital expenditure, including teaching and non-teaching staff.

The objectives and purposes of Schools of the Future range over educational ('to enhance student learning outcomes', 'actively foster the attributes of good schools'); professional ('recognise teachers as true professionals', 'allow principals to be true

EA 028 533

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leaders'); community ('to determine the destiny of the school, its character and ethos') and accountability ('for the progress of the school and the achievement of its students') [excerpted from Hayward, 1993; see also Caldwell and Hayward, 1998].

Schools of the Future was implemented at the same time that the state government took action to rein in a high level of public debt and bring Victoria into line with funding and other standards for public education that form the basis of fiscal transfers between national and state governments (in Australia, education is a responsibility of the states but the national government is the only level of government with an income taxing capacity). About 300 schools have been closed or amalgamated and about 8000 staff considered in excess of requirements have left the system. State debt has been reduced through a regime of privatisation of public services including electricity, gas, railways and water. Taking all things into account, the reform of the public sector is similar to what has occurred in Britain and New Zealand, and some parts of Canada and the United States.

This paper

This paper is concerned with the impact of such reform on learning outcomes for students, with a particular focus on the role of the school principal, especially in respect to the management of resources. The starting point is a description of the research program from which findings are drawn. Then follows an account of emerging roles and preferences of principals for the new organisational arrangements. A description of new mechanisms for the management of resources sets the scene for a review of findings on learning outcomes, with a relatively stable model of direct and indirect effects now evident. The final section describes the professional culture of the principalship that is emerging under these conditions. This is problematic in several respects, warranting further work in the domains of research, policy and practice.

Research program

Findings are drawn from several research projects. The primary source is the Cooperative Research Project, a joint endeavour of the Education Department of Victoria, the state agency with responsibility for public education, the Victorian Association of State Secondary Principals, the Victorian Primary (Elementary) Principals Association, and the University of Melbourne through its Department of Education Policy and Management. The Cooperative Research Project began in mid-1993 and concludes in mid-1998, completing on schedule a planned five-year longitudinal study of the processes and outcomes of Schools of the Future. Seven state-wide surveys of representative samples of principals have been conducted and these have covered virtually every aspect of the reform, including its impact on learning outcomes for students (Cooperative Research Project 1994, 1995a, 1995b, 1996, 1997, 1998). Findings from the most recent survey are reported here (Cooperative Research Project, 1998). Seventeen investigations have focused on discrete elements, including leadership, professional development, new work place practices, resource allocation and school improvement. Four of these investigations are reported (Ford, 1995; Gurr, 1996; Johnston, 1997; and Wee, 1998).

The Cooperative Research Project is noteworthy, not only because of its duration, but for the high level of sustained collaboration, with each of the participating organisations contributing two persons to a Steering Committee that negotiated the research agenda and had oversight of its implementation. While support was provided by the Australian Research Council in the early stages, each organisation contributed resources of one kind or another throughout the five year period.

The second source is the School Global Budget Research Project conducted over three years from 1994 to 1996 that gathered information on approaches to resource allocation in a representative sample of Victorian schools to guide recommendations to the

Minister for Education on how resources should be allocated to schools ('how the cake is to be cut') (see Education Committee, 1994; 1995; 1996)

The third source is early findings from a major international project focused on approaches and impacts of resource allocation under conditions of decentralisation. This is a cooperative effort of the University of Melbourne (Brian Caldwell, chief investigator) and the University of Wisconsin at Madison (Allan Odden, chief investigator), in association with the Open University in the UK (Rosalind Levacic, associate investigator). This effort is funded in Australia by the Australian Research Council, with two main purposes (1) to develop and test a theoretical school-based funding model for per capita resourcing of schools based on the learning needs of students, taking into account factors such as stages of schooling, relative student and school disadvantage, disabilities and impairments, and location and distance; and (2) to investigate linkages between local responsibility for the management of resources, internal resource allocation decisions and student learning outcomes.

Preliminary findings from the third project have contributed to another international project, in this instance an initiative of the International Institute for Educational Planning of UNESCO which provides a comparative perspective of efforts in Australia, Britain, Canada, New Zealand and the United States to develop needs-based approaches to the formula-based funding of schools under conditions of decentralisation (reported in Ross and Levacic, 1998).

Role of the principal

In descriptive terms, the change in role of principal in Australia, especially Victoria, has been profound. The traditional role in a highly centralised system that prevailed until the mid-1970s is contrasted with the role that has emerged in Victoria in a highly decentralised system.

Traditional role

The system of public education was highly centralised until the early 1970s. Few decisions could be made at the school level. Teachers were assigned to schools by formula. There was no selection of principals or teachers at the local level. All non-staffing resources were allocated by formula whether the school needed them or not. Curriculum was centrally-determined and there was a regime of inspection. There was little involvement of the community in local decision-making. No funds of any kind were decentralised from system to school and any cash at the school level was raised locally by voluntary effort. School design was standard, with rapid growth in the number of schools and students as the effects of immigration and a rising birth rate after World War 2 took effect. The principal made few decisions of substance. Markets were virtually non-existent in public schools. Retention rates to the end of secondary schooling were low. In today's terms, classes were large and a relatively high proportion of teachers were untrained. The national government had minimal involvement in school education.

Emerging role

There have been profound changes to the role of the principal since the early 1970s. Many decisions formerly made centrally have been decentralised, with a parallel increase in decision-making for teachers and parents, especially through school councils that have had limited policy powers since the early 1980s, at which time there was provision for the local selection of teachers. National and state governments made funds available for particular purposes and these have been steadily decentralised for local decision-making. The former zoning of students to local attendance boundaries was abandoned in the mid-1980s, immediately creating a market for students, especially as enrolments started to decline in some communities and new funding mechanisms were

funding mechanisms were created so that the money followed the student as budgets were decentralised. The student profile became increasingly multi-cultural with the impact of large scale immigration of World War 11, so that many schools now have scores of languages spoken in the homes of their students. While inspection of schools was abandoned in the late 1970s and early 1980s, a centrally-determined framework has been established with a state curriculum and standards framework now in place, and a wide range of indicators on which schools must report to their local communities and the Department of Education. There are system-wide tests in key subjects at two points in primary (elementary) and one point in secondary now in a trial phase. There is increasing opportunity for local selection of teachers and there are schemes for teacher appraisal as well as a performance management system for principals. Principals now have responsibility for almost the total cost of running the school. There is a steady drift of students from schools owned and operated by government to schools owned and operated privately, with the latter now enrolling more than 30% of students. Both kinds of schools receive public funding, with the low but increasing proportion of public funding for non-government schools being augmented by income from fees.

Principals' perceptions of the new role

Perceptions and preferences of principals in respect to the new role in Schools of the Future have been systematically and comprehensively tracked through successive surveys of the Cooperative Research Project. Each has drawn on a large representative sample. The following summarises key findings.

1. The work load of principals has increased since the base-line survey in the pilot phase in 1993, rising from a mean of 57 hours per week to 59 hours per week. This work load is greater than was expected by most principals.

2. Mean job satisfaction has fallen over the life of the reform, initially 5.3 on a 7-point scale for principals in the initial pilot phase of Schools of the Future, falling but stabilising across all schools to 4.3.

3. While confidence in the attainment of the objectives of reform remains moderate to high, principals report modest achievement of many of the expected benefits, and low achievement in respect to expected increases in levels of resourcing and teacher satisfaction and to expected reduction in bureaucratic interference.

4. Many problems have been encountered, and while some have lessened in magnitude, many have not, notably workload and aspects of resourcing.

5. Principals report low levels of satisfaction with the principal performance assessment scheme and the extent to which their schools have been able to achieve flexibility in their staffing arrangements.

6. Despite these problems, concerns, dissatisfactions and diminished expectations, principals report significant benefits in respect to curriculum and learning outcomes and approaches to planning and resource allocation, and these are described in more detail below.

7. Taking all things into account, the overwhelming majority of principals would not wish to return to previous arrangements before Schools of the Future. In the four frameworks of reform, new arrangements are preferred by 86% for the Curriculum Framework, 86% for the Resources Framework, 81% for People Framework, and 82% for the Accountability Framework. Overall, 89% prefer the new arrangements.

These findings are consistent with those in studies in other countries, notably in respect to intensification of work and preference for the new arrangements (see Bullock and

Thomas, 1994 for findings over three years in surveys of principals in Britain; and Wylie, 1997, for an account of the experiences of primary principals in New Zealand).

Resource management

A central feature of Schools of the Future and parallel reforms in other places is the decentralisation of a substantial part of the total budget for school education. In the case of Victoria, this is nearly 90%, exceeding that found in most local education authorities in Britain, in New Zealand and those districts in Canada and the United States that have embarked on schemes of school-based management. When combined with a capacity to select teachers at the local level, it is evident that the role of the principal has changed significantly in respect to the management of resources. In former times, under centralised arrangements, no funds were decentralised from the centre to the school and there was no involvement of the school in the selection of teachers.

The extent to which a capacity for the management of resources is linked to learning outcomes is an important issue for policy and research. It has had to be addressed from the outset at the system level, for governments and other authorities must make decisions on how resources will be allocated to schools in their decentralised budgets. Assumptions about the links between resources and learning have been tested and an unprecedented amount of information has been gathered about past and present approaches to allocation.

There are two broad types of decisions to be made by government. One is the total amount of the overall budget to be allocated to schools ('the size of the cake') and the other is how that amount is to be allocated to schools ('how the cake is cut'). The research reported here is concerned with the second of these and how resources so allocated are deployed at the school level.

Funding mechanisms

In Victoria, six principles were adopted to guide the allocation of resources to schools: pre-eminence of educational considerations, fairness, transparency, subsidiarity, accountability and strategic implementation (Education Committee, 1994; 1995; 1997). The outcome was a funding mechanism that involved a basic per pupil allocation according to stage of schooling; a curriculum enhancement allocation for schools with particular programs; pupil specific allocations for those with disabilities and impairments, special learning needs, and from non-English speaking backgrounds; and specific school allocations to take account of rurality and isolation and premises-related costs. Research on school and classroom effectiveness and improvement helped shape recommendations on relative weighting of these components.

It is noteworthy that this classification of factors for allocating resources to decentralised budgets has international application. Approaches to needs-based formula allocation of resources to schools in Australia, Britain, Canada, New Zealand and the United States can all be classified in this way (see Ross and Levacic, 1998, forthcoming). This is an important development if the school reform movement is to have strong educational underpinning as far as resource allocation is concerned.

Principals' perceptions of resource management

Principals were generally concerned about overall levels of resourcing for their schools. Of particular interest in this paper is how resources, once allocated to schools, were then deployed at the school level, and what were the effects on learning outcomes. The views of principals were sought on this matter in each of the surveys in the Cooperative Research Project.

In the most recent survey (Cooperative Research Project, 1998), principals reported moderate to high levels of improvement in the extent to which having a 'global budget' enabled the school to plan for resource management for the next three years, build a relationship between curriculum programs and resource allocation, allocate resources to identified educational needs of students, and achieve priorities identified in the school charter. At least 75% of principals rated the extent of improvement at 3 or more on a 5-point scale (from 1 'low' to 5 'high'), with a modal rating of 4 in each instance.

Principals also report moderate to high realisation of expected benefits in the processes of planning and resource allocation at the school level. More than 80% gave ratings of 3 or more on the same 5-point scale for items on the extent of realisation of better resource management, clearer sense of direction, increased accountability and responsibility, greater financial and administrative flexibility, and improved long-term planning.

Principals did not report so positively on another aspect of resource management, namely, their capacity to select staff and the take-up of what is known as 'full staffing flexibility'. Benefits in these matters were expectations for Schools of the Future. Most principals reported low level of realisation. The issue is of ongoing concern in the relationship between the professional and industrial organisations of principals and the Education Department of Victoria as efforts are made to harmonise school and system needs.

While principals are concerned about overall levels of resources and matters related to the selection of staff, it is evident that significant benefits have been achieved in respect to the management of resources. Of over-arching importance, however, is the way in which these gains have been translated into improvements in learning outcomes for students and, for the purposes of this paper, the role of the principal and other leaders in achieving these outcomes.

Modelling effects on learning outcomes

It is sobering to note the consistent finding in research over many years that there appear to be few if any direct links between school-based management and gains in learning outcomes for students (see meta-analysis in Summers and Johnson, 1996; earlier review by Malen, Ogawa and Kranz, 1990). Some observers have noted that such gains are unlikely to be achieved in the absence of purposeful links between capacities associated with school reform, in this instance, school-based management, and what occurs in the classroom, in learning and teaching and the support of learning and teaching (see Bullock and Thomas, 1997; Hanushek, 1996, 1997; Levacic, 1995; Smith, Scoll and Link, 1996; OECD, 1994). According to Wirt, the absence of impact may be due to preoccupation with an 'adult game' rather than a 'children game' (Wirt, 1991). Some researchers have developed models for achieving these linkages, with promising work in Hong Kong by Cheng and Cheung (see Cheng, 1996; Cheng and Cheung, 1996; Cheung and Cheng, 1997).

Principals perceptions of outcomes

The potential for linkage is present in the Victorian reform because of its comprehensive and coherent nature, with the shift in authority, responsibility and accountability for key functions shifting from the centre to the school, all occurring within a curriculum and standards framework in eight key learning areas, and realignment of important personnel functions. Principals provided ratings on the extent of realisation of expected benefits or extent of achievement of certain outcomes. Ratings for seven domains are reported here.

1. Levels of *Confidence in Attainment of SOF* (Schools of the Future) *Objectives* were cited earlier. While there has been a downward trend over the life of the reform,

especially on professional matters affecting teachers and principals, ratings remain moderate to high, especially in respect to accountability for achievement of students and whether the reform fosters the attributes of good schools.

2. For *Curriculum and Learning*, successive surveys have consistently shown that principals believe there has been a moderate to high level of realisation of the expected benefit in respect to improved learning outcomes for students. In the most recent survey, 84% gave a rating of 3 or more on the 5-point scale (1 is 'low' and 5 is 'high'). Similar ratings were made for the relevance and responsiveness of curriculum and opportunity for innovation.

3. Findings for *Planning and Resource Allocation* were cited in the previous section of the paper, with moderate to high levels of realisation in most respects, a notable exception being level of resourcing ('the size of the cake').

4. Moderate to high levels of realisation were reported in a range of indicators in the *Personnel and Professional* domain, and these were concerned with better personnel management, enhanced professional development, shared decision-making, improved staff performance and more effective organisation following restructure. Relatively low ratings were given to the expectation that there would be increased staff satisfaction and an enhanced capacity to attract staff.

5. Expected benefits in the *School and Community* domain were generally achieved for cohesiveness of staff and community, level of community involvement, higher community profile, enhanced school identity and level of cooperation between schools. As noted earlier, expectation for lower levels of 'bureaucratic interference' have been largely unrealised.

6. Principals also gave moderate to high ratings for the extent to which there had been *Curriculum Improvement due to CSF* (Curriculum and Standards Framework). Items were concerned with improvements to school capacity in a range of matters including planning the curriculum, establishing levels and standards for students, moving to a curriculum based on learning outcomes and meeting the needs of students.

7. Principals gave mixed ratings for *CSF Curriculum Support*, with moderate to high ratings for course advice, teacher networks and professional development focusing on leadership teams, and generally low ratings of support for the system-wide testing scheme at the primary (elementary) level (the Learning Assessment Project or LAP) and the computer-based management information system for students (KIDMAP).

Modelling the links between elements of reform and learning outcomes

These findings are generally positive but they do not illuminate the issue of the extent to which the capacities fostered by the reform have a direct impact on learning outcomes for students. Structural equation modelling was employed in the analysis of findings in each of the last three surveys, using LISREL 8 (Jöreskog and Sörbom, 1993). This approach allows the analysis of ordinal-scales variables such as those utilised in this research. The model reported here derives from the most recent survey (Cooperative Research Project, 1998).

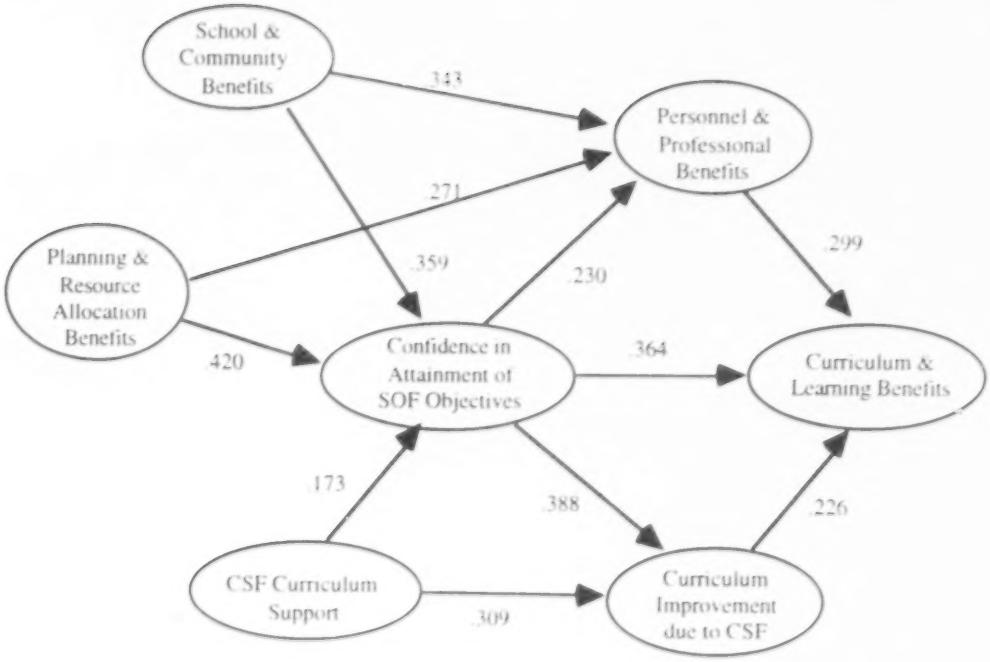
The first step was to create clusters of related items and to treat these as constructs. These constructs are the seven domains, for which findings were reported above, with construct titles shown in italic. Further analysis was conducted to determine the 'goodness of fit' between the data and the model formed by these constructs.

Figure 1 contains the explanatory regression model that shows the interdependent effects among variables (in this instance, latent variables that represent the constructs) on the variable *Curriculum and Learning Benefits*, which is the object of interest in this

section of the paper. Standardised path coefficients are shown, representing the direct effects (all paths are statistically significant beyond the $p < 0.05$ level by univariate two-tailed test). The fit between the data and model is very good indeed, with an Adjusted Goodness of Fit Index of 0.969, indicating that almost all (96.9%) of the variances and co-variances in the data are accounted for by the model.

Figure 1

Explanatory regression model showing interdependent effects among factors influencing perceived *Curriculum and Learning Benefits* (Cooperative Research Project, 1998)



The path coefficients may be interpreted in this manner. The direct effect of *Personnel and Professional Benefits* on *Curriculum and Learning Benefits* is indicated by a path coefficient of 0.299. This indicates that an increase in the measure of *Personnel and Professional Benefits* of 1 standard deviation, as reflected in ratings of principals, produces an increase in the measure of *Curriculum and Learning Benefits* of 0.299 of a standard deviation.

The model shows that three variables have a direct effect on *Curriculum and Learning Benefits* (which includes improved learning outcomes for students), namely, *Personnel and Professional Benefits* (which reflects ratings for realisation of the expected benefits of better personnel management, enhanced professional development, shared decision-making, improved staff performance, more effective organisation following restructure, increased staff satisfaction and an enhanced capacity to attract staff); *Curriculum Improvement due to CSF* (which reflects ratings for improvement of capacity for planning the curriculum, establishing levels and standards for students, moving to a curriculum based on learning outcomes and meeting the needs of students); and *Confidence in Attainment of SOF Objectives*.

Noteworthy are the pathways of indirect effects, illustrated for *Planning and Resource Allocation Benefits*, which is mediated in respect to its effect on *Curriculum and Learning Benefits* through *Personnel and Professional Benefits* and *Confidence in Attainment of SOF Objectives*. Expressed another way, realising the expected benefits of better resource management, clearer sense of direction, increased accountability and responsibility, greater financial and administrative flexibility, and improved long-term planning, will have no direct effect on *Curriculum and Learning Benefits* but will have an indirect effect to the extent they impact on *Personnel and Professional Benefits* which in turn have a direct effect on *Curriculum and Learning Benefits*.

Also noteworthy are the constructs that have direct effects on *Confidence in Attainment of SOF Objectives*. High ratings of confidence were associated with high ratings for the achievement of *Planning and Resource Allocation Benefits*, *School and Community Benefits* and *CSF Curriculum Support*. The likely explanation is that unless principals experience benefits in these last three domains, they are unlikely to have confidence in the reform.

Modelling of this kind has been done for findings in each of the last three surveys and there is now stability in the model, with only small variations in the directions of effects and the size of path coefficients.

Limitations of the model

The findings in these surveys are limited to the extent that they are based on the perceptions of principals rather than measures of student achievement. This has been a concern in most efforts to determine the impact of reform in recent years. In the case of the Cooperative Research Project, there was no system-wide base-line data on student achievement when Schools of the Future was implemented, and efforts to compare achievement in schools in the pilot phase with that in schools that had not entered at the outset were thwarted by a union ban on the collection of data.

In the most recent survey of principals, respondents were asked to indicate the basis for their rating of the extent to which the expected benefit of improved student learning had been realised. They were asked to rate the importance of certain achievement measures and indicators of attendance, time allocations in curriculum, participation rates, exit / destination data, parent opinion, staff opinion and level of professional development (a total of 23 indicators were provided). Most principals indicated moderate to high importance for these indicators in arriving at their ratings, with the most notable exception being the low level of importance attached to the system-wide testing program in primary schools.

In a related part of the most recent survey, principals were asked to rate the extent of change for each of the aforementioned indicators, with a 5-point scale of 'decline' (1 or 2), 'no change' (3) or 'improve' (4 or 5). A large majority of principals reported either no change or improvement, with more than 50% reporting improvement for most indicators, with the notable exception being achievement measures associated with the system-wide testing program in primary.

In the absence of student achievement data that would put the matter beyond doubt, one way or the other, a high level of trustworthiness ought be attached to these findings, given consistency in ratings, the stability of the model over the last three years, and the declarations by principals that they took account of a range of indicators in forming their judgements.

Exploring the links in case study research

The next stage of research combines the agenda for the Cooperative Research Project and the international project supported by the Australian Research Council. The latter brings together work led by Caldwell at the University of Melbourne, Levacic at The Open University and Odden at the University of Wisconsin at Madison.

The first stage of the Australian component involves case studies of primary and secondary schools in the Schools of the Future program. Early progress in the primary investigation, designated the Learning Outcomes Project, is reported here. Three questions are addressed in this doctoral research by Julie Wee (1998):

1. Where improved student learning is claimed, how is it that schools know that there has been improvement in learning outcomes and what is it that has been done at school level that allows schools to make those claims?

2. Can improved student learning be linked, either directly or indirectly, to the reforms that have occurred under Schools of the Future?

3. Where improved student learning is claimed, what are the dimensions of leadership and strategies used by leaders in schools to promote increased student learning?

The research is being carried out in the Western Metropolitan Region of the Education Department. Eight primary schools that had expressed a willingness to participate in a case study following the survey of principals were invited to name up to three areas of the curriculum where improvement in student learning had occurred and where evidence was available to substantiate such a claim. Four schools were selected, reflecting diversity in size, setting and curriculum area where evidence of improvement was claimed.

Preliminary findings in the Learning Outcomes Project reveal that schools can cite evidence that their efforts have led to improved outcomes for students. They draw on many sources of data in recognising improved student learning in their schools. This illustrates the capacity being developed in the system to gather information about the performance of schools. It was noted above in connection with the findings of the most recent survey of principals in the Cooperative Research Project that most respondents had been able to draw on up to 23 indicators in making their judgement of the extent to which there had been improvement in learning outcomes for students.

Maps of direct and indirect links have been prepared by Wee for each school and these suggest how school capacity associated with being a School of the Future has led to improved outcomes for students. These maps are consistent with the outcomes of the structural equation modelling reported earlier but they are richer and more informative, with differences among schools in the pathways that have been followed, and they are explicit in respect to the role of school leaders, including the principal.

Professional culture of the principalship

Policy milieu

Changes in the role of principal over the last two decades were described in general terms at the outset. These changes have occurred in a policy milieu in which centrally-determined frameworks of curriculum, policies, priorities, standards and accountabilities have shaped action at the school level to which significant authority and responsibility has been decentralised. Expectations for schools have increased. All is occurring in the context of limited if not declining resources for public education and the transformation of the way in which public services are designed and delivered.

The field is contentious and, despite assertions that what has occurred is an outcome of particular ideologies (see contributions in Smyth, 1993), there is much evidence around the world that change along these lines is likely to continue. An illustration of this is presented by experience in Britain under New Labour, where there is no sign that the major features of reform under the New Right agenda of the last decade will be reversed, despite assurances that attention is to shift from structures to standards, and pressure is to be balanced by support. Targets for improvement have been set in literacy and have been foreshadowed for numeracy at the school, local authority and national levels. Education action zones have been established, but the role of the local (public) education authority is no more assured than in the past, for there is the possibility of private management, even from international providers.

The new professional culture in Schools of the Future

The evidence presented in this paper suggests that principals in Schools of the Future in Victoria have accommodated the new milieu in the practice of their profession and that a new culture has emerged. This is despite several dysfunctions and evidence of intensification of work in the same manner experienced by teachers (see Hargreaves, 1994 for a critique on intensification). Despite concerns about work load, resourcing, and lack of flexibility in staffing, it is clear that the overwhelming majority of principals would not wish to return to previous arrangements.

Three sets of case studies associated with the Cooperative Research Project have illuminated the professional culture of the principalship in Schools of the Future (Ford, 1995; Gurr, 1996; Johnston, 1997).

Masters research by Patricia Ford (1995) provides a comprehensive and detailed picture of the new role of the primary (elementary) principal. Her starting point was a set of eight Key Result Areas for principals developed by the Department of Education following consultation with principals in Schools of the Future:

- School ethos and learning environment
- Vision and future directions
- Implementing school charter, particularly goals and priorities
- Curriculum overview and monitoring of student outcomes
- Resources utilisation and pursuit
- Personnel selection, performance and development
- Interdependent organisational structure and key teams performance
- Policy development and support for school council

(Ford, 1995)

Ford developed a set of 10 tasks in each of these 8 Key Result Areas and surveyed a representative sample of primary principals in one metropolitan region in Melbourne. She found that there was high agreement among respondents on the importance of all 80 items, indicating the extraordinarily rich and complex role for the primary principal under the new arrangements. Tasks of highest importance were concerned with educational issues, financial management, establishing priorities, establishing an ethos of shared aspirations, communicating with school council and implementing council policies (Ford, 1995, p. 123).

Most striking among Ford's findings were those related to gender. For 73 of the 80 items, women gave higher ratings of importance than did men, with differences being statistically significant in 27 instances. Among the latter, those of greater importance to women:

> concerned the valuing of participation to achieve consensus in school ethos, a common vision, team development for leadership density, planning and review of school operations, and school budgeting. As well, the female respondents were more future oriented and valued analysing social and educational trends. Educationally, they valued, significantly more than their male colleagues, catering for individual differences, independence in learning, improving the teaching learning processes and refining assessment and reporting procedures. (Ford, 1995, p. 125)

In the matter of gender, Ford suggested that 'females perceive their role through a richer tapestry of dimensions than do their male colleagues' (Ford, 1995, p. 125). The findings suggest that women principals tend to be attitudinally more disposed than men to the emerging role of principal in the self-managing school, at least in the Victorian setting.

David Gurr conducted a doctoral study of secondary principals in Victoria's Schools of the Future. He identified 17 themes associated with the leadership role of principals and concluded that leadership which focused on learning and teaching was important, but less direct than was practised or advocated in the past; that transformational leadership was evident, marked by a future orientation, with cultural and symbolic dimensions; and that a capacity for accountability and responsiveness was needed (Gurr, 1996a, 1996b, 1996c). Changes to the leadership role of the principal since the reform was initiated in 1993 were described. There was greater complexity and a higher level of responsibility in accountability, school community relations, direction setting, personnel and financial management, and for many, ensuring the survival of the school. Principals were becoming less hands-on and more involved with external networks, relying more on delegation and the support of senior staff to cope with daily demands.

Carol Johnston conducted case studies of three secondary schools in Victoria identified by knowledgeable people as having the characteristics of a learning organisation (Johnston, 1997). Her doctoral research addressed the question 'What are the characteristics of schools and principals which are perceived to be successful learning organisations?' The five disciplines in the Senge (1992) model provided a frame for the study: systems thinking, personal mastery, team learning, shared vision and mental models. She found that the model should be modified for the school setting, with four key elements being instrumental in the development of a learning organisation in schools: inclusive collaborative structures, effective communication channels, integrated and inclusive professional development programs, and learning focussed leadership.

Johnston's concept of 'learning focussed leadership' appears critical if the linkages described in this paper are to be made effective. It is a rich concept but it is strategic and empowering more than it is heroic or 'hands on'. She described the principal of the exemplar among the three schools in the following terms:

> The principal was clearly influential but, at the same time, was regarded as a team player. She was particularly adept at demonstrating what the current reality was while exposing the school to a vision of what could be. She articulated the creative tension gap and indicated the way forward. In the process the school was infused with an energy and optimism not often seen in schools at this time. The idea that all within the school should be leaders captures the notion of leadership of teams. . . (Johnston, 1997, p. 282)

A meta-analysis of research on the relationship between the role of the principal and school effectiveness was carried out by Hallinger and Heck, with their work spanning the period from 1980 to 1995, the years in which the school effectiveness and school improvement movement gathered momentum. Consistent with the findings of Gurr and Johnston, they uncovered surprisingly little evidence of a direct relationship, but consistent evidence of an indirect effect in their testing of models which suggest that:

> . . . principal leadership that makes a difference is aimed toward influencing internal school processes that are directly linked to student learning. These internal processes range from school policies and norms (e.g., academic expectations, school mission, student opportunity to learn, instructional organization, academic learning time) to the practices of teachers. Studies based on a mediated-effects model frequently uncovered statistically significant indirect effects of principal leadership on student achievement via such variables. (Hallinger and Heck, 1996, p. 38)

Research by Peter Hill and his colleagues in the Victorian Quality Schools Project illustrates this conclusion. They found that class effect sizes were much greater than school effect sizes in analysis of differences in student achievement, confirming that the school improvement effort should be focused on the classroom (Hill and Rowe, 1996). Hill contends that principals have a central, if indirect role by helping to create the 'pre-conditions' for improvement in classrooms, including setting direction, developing commitment, building capacity, monitoring progress and constructing appropriate strategic responses (Hill, 1997).

A strategic role in the new culture

The research findings of Hallinger and Heck in their meta-analysis, and of Ford, Gurr, Hill and Johnston in Victoria, are consistent with the view that there is no direct link between the capacities that come to schools in the reform movement, including the new authorities and responsibilities of principals, and learning outcomes for students, unless explicit links are made between these capacities and what occurs in the classroom. Principals and other school leaders can, however, play an important role in setting events in train that will make these links effective, for example, the processes for the selection of staff; the professional development of teachers; the focusing of curriculum to the particular learning needs of students; and the management of a planning and resource allocation system that ensures that data on need and performance are analysed, priorities are set and action proceeds. In other words, the linkages and gearing illustrated earlier must be made effective and this calls for leadership and management of the kind illustrated here (see Caldwell and Spinks, 1998 for a framework of strategic intentions for school leaders who seek to make these links). Consistent with general contemporary writing on leadership, the whole enterprise will be shaped by a shared vision of what can be accomplished.

There are many issues to be resolved in established the new professional culture for principals and other leaders. An important strategic issue is the nature of the reform movement and the manner in which the profession at large should be involved (see critique of past efforts in Hargreaves and Evans, 1997). Another is the status of public education itself, including the manner in which it is resourced (see Labaree, 1997 for an analysis of concerns in the rise of public education as a 'private good'). There is certainly a substantial agenda for researchers, policy-makers and practitioners who seek a 'new professionalism' in school education.

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